Sheet 1 of 16

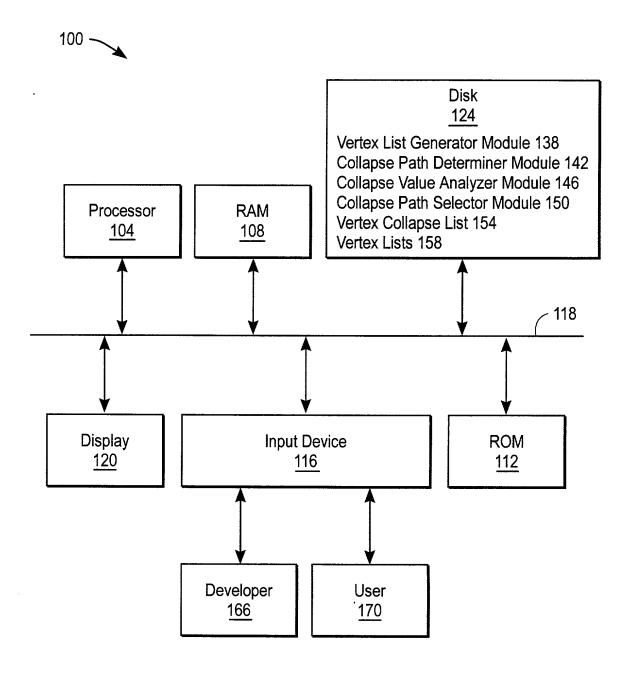


FIG. 1A

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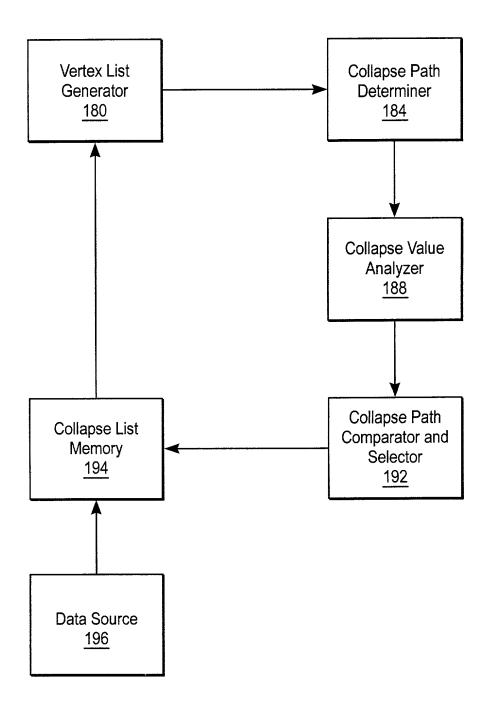


FIG. 1B

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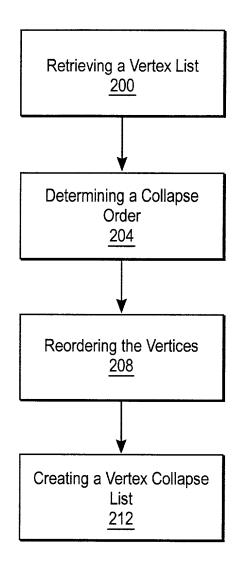


FIG. 2A

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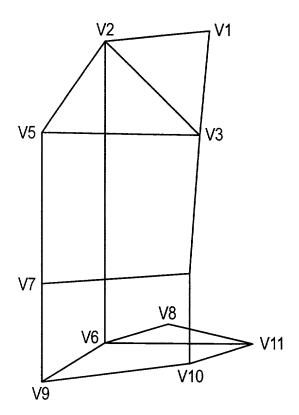


FIG. 2B

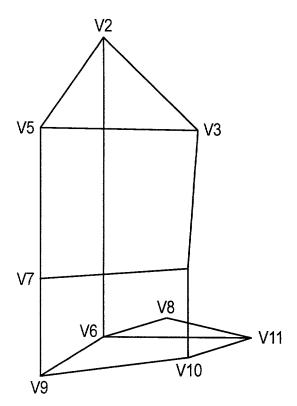


FIG. 2C

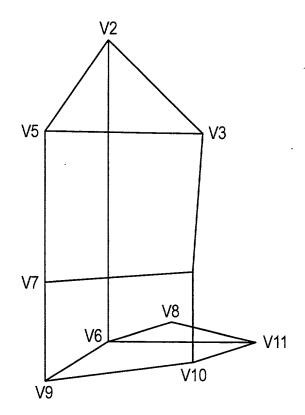


FIG. 2D

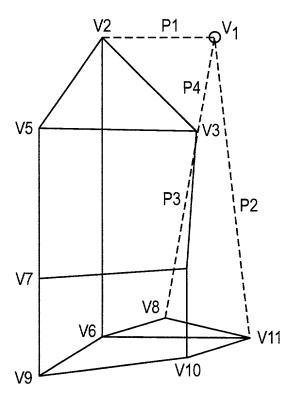


FIG. 2E

Inventors: Saul S. Kato, et al. Atty. Docket No.: 21434-06721 Sheet 6 of 16 204 ~ 200 Determine a Set of Select a Next Vertex Collapse Paths to be Collapsed 300 324 Select a Collapse Path Associate a Collapse from the Set of Collapse Priority to the Selected Vertex **Paths** 304 326 Collapse the Next Compute Visual Distribution Vertex Factors for Selected 328 Collapse Path 308 Is Determine a Collapse There More Than Yes Value for Selected One Vertex Remaining? Collapse Path 332 312 No Are There More Yes Collapse Paths? 316 No Compare Collapse Values to Determine Collapse Path Causing Least Visual Distortion 320 FIG. 3

Title: Multi-Resolution Geometry

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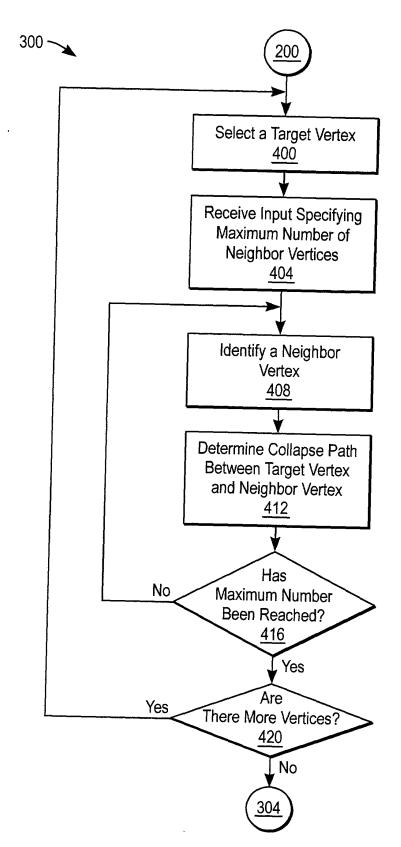


FIG. 4

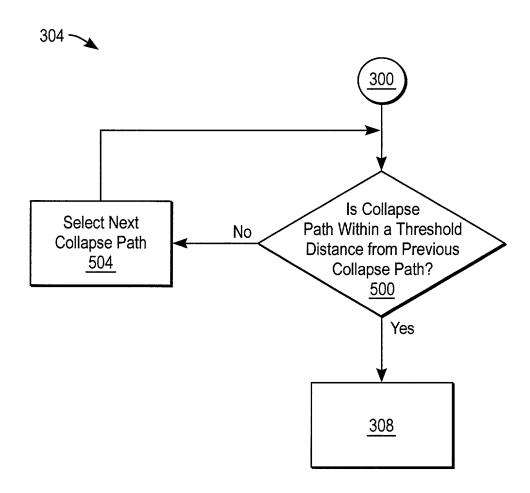


FIG. 5

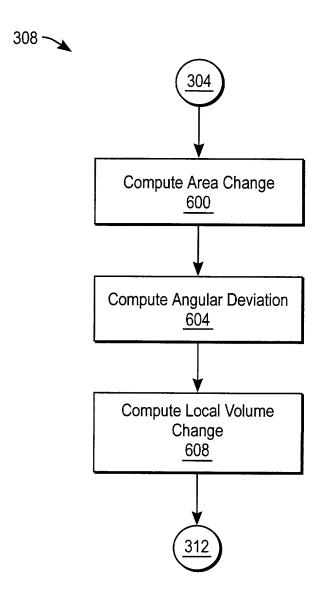


FIG. 6

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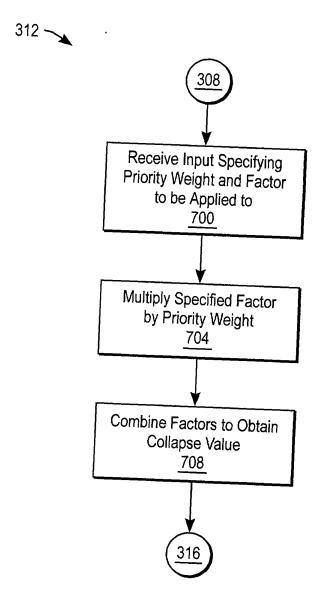
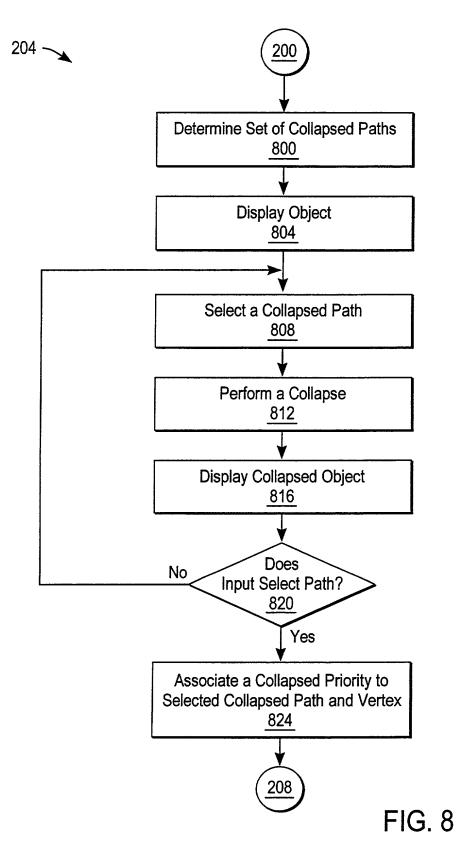


FIG. 7

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304 -

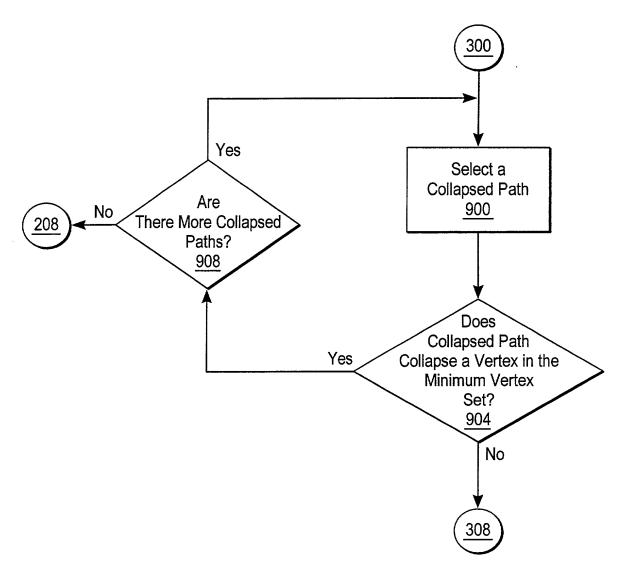


FIG. 9

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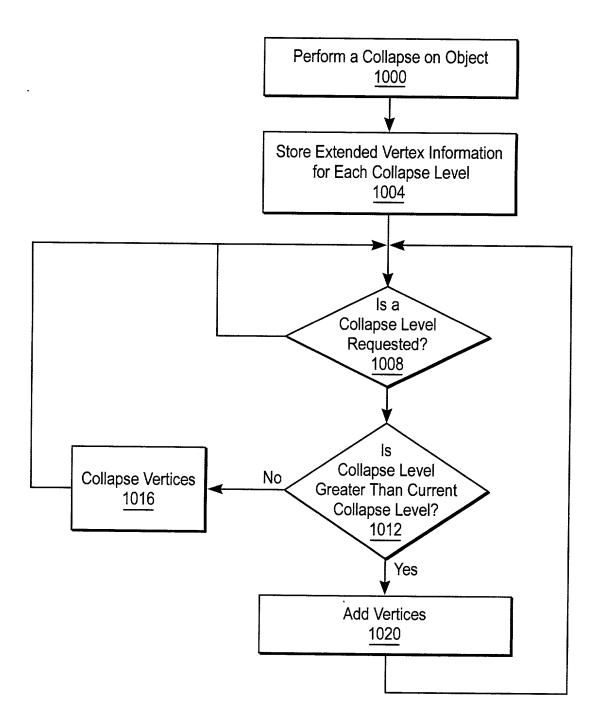


FIG. 10

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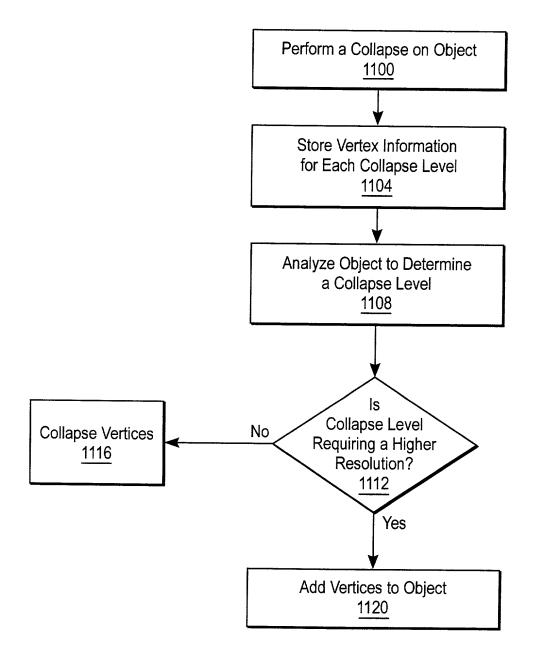


FIG. 11

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Title: Multi-Resolution Geometry Inventors: Saul S. Kato, et al. Atty. Docket No.: 21434-06721 Sheet 15 of 16 **Determine Velocity of Object** 1200 ls a Subtract Compare Velocity to Collapse-level/ Greater Collapse No Polygons **Velocity Table** Level Required? 1240 1204 1232 Yes Determine Projected Area of Object Add Polygons 1208 1236 Compare Projected Area to 1232 Collapsed Level/ Projected Area 1212 Determine Number of Polygon Being Displayed 1216 Compare to a Predefined Target **Number of Polygons** 1232 1220 **Determine Frame Rate** 1224 Compare to a Predefined 1232 Frame Rate

FIG. 12

1228

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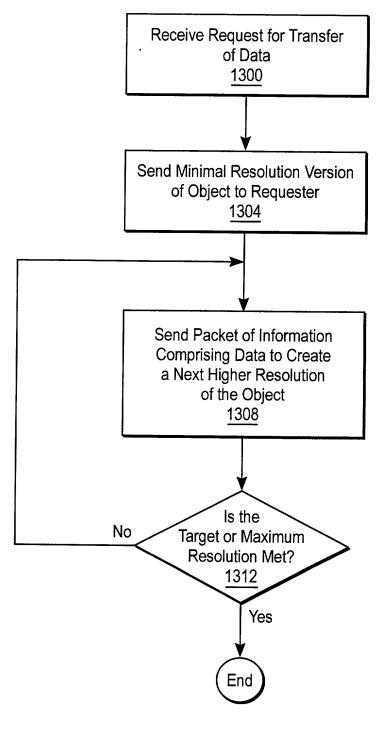


FIG. 13